

Customer No.: 31561
Docket No.: 10870-US-PA
Application No.: 10/604,689

AMENDMENT

To the Claims:

Please amend the claims as follows:

Claim 1. (currently amended) A pixel array for a non-touch panel input device, wherein the pixel array at least comprises a plurality of first pixel structures with each pixel structure at least comprising:

a sub-pixel, adapted for displaying a color in the visible light spectrum; [[and]]

a first strip-shaped shadow pixel, longitudinally positioned on and extending along a first side of the sub-pixel, wherein the first strip-shaped shadow pixel emits electromagnetic radiation in the invisible part of the spectrum either in a first electromagnetic radiation state or in a second electromagnetic radiation state; and

a second strip-shaped shadow pixel, latitudinally positioned on and extending along a second side of the sub-pixel, wherein the second strip-shaped shadow pixel emits electromagnetic radiation in the invisible part of the spectrum either in a third electromagnetic radiation state or in a fourth electromagnetic radiation state such that the third and the fourth electromagnetic radiation state are different from each other,

wherein a position of the sub-pixel can be determined by detecting the first electromagnetic radiation state or the second electromagnetic radiation state of the electromagnetic radiation in the invisible part of the spectrum emitted from the first strip-shaped shadow pixel and the third electromagnetic radiation state or the fourth electromagnetic radiation state of the electromagnetic radiation in the invisible part of the spectrum emitted from the second strip-shaped shadow pixel.

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Claim 2. (previously presented) The pixel array of claim 1, wherein the first strip-shaped shadow pixel and the second strip-shaped pixel are fabricated using a material capable of producing electromagnetic radiation in the invisible portion of the light spectrum.

Claim 3. (canceled)

Claim 4. (previously presented) The pixel array of claim 1, wherein the first shadow pixel in the first electromagnetic radiation state has a length or width different from the first shadow pixel in the second electromagnetic radiation state.

Claim 5. (previously presented) The pixel array of claim 1, wherein the first shadow pixel in the first electromagnetic radiation state has a reflectivity different from the first shadow pixel in the second electromagnetic radiation state.

Claim 6. (previously presented) The pixel array of claim 1, wherein the first shadow pixel in the first electromagnetic radiation state radiates with a wavelength different from the first shadow pixel in the second electromagnetic radiation state.

Claim 7. (previously presented) The pixel array of claim 1, wherein the first shadow pixel in the first electromagnetic radiation state is fabricated using a material different from the first shadow pixel in the second electromagnetic radiation state.

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Claims 8-10. (canceled)

Claim 11. (previously presented) The pixel array of claim 1, wherein the second shadow pixel in the third electromagnetic radiation state has a length or width different from the second shadow pixel in the fourth electromagnetic radiation state.

Claim 12. (previously presented) The pixel array of claim 1, wherein the second shadow pixel in the third electromagnetic radiation state has a reflectivity different from the second shadow pixel in the fourth electromagnetic radiation state.

Claim 13. (previously presented) The pixel array of claim 1, wherein the second shadow pixel in the third electromagnetic radiation state radiates with a wavelength different from the second shadow pixel in the fourth electromagnetic radiation state.

Claim 14. (previously presented) The pixel array of claim 1, wherein the second shadow pixel in the third electromagnetic radiation state is fabricated using a material different from the second shadow pixel in the fourth electromagnetic radiation state.

Claim 15. (original) The pixel array of claim 1, wherein the pixel array furthermore comprises a plurality of second pixel structures with each second pixel structure at least having a sub-pixel without a first shadow pixel such that the sub-pixel in each second pixel structure is located in a position corresponding to the sub-pixel of the

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first pixel structure.

Claim 16. (original) The pixel array of claim 15, wherein each second pixel structure furthermore comprises a second shadow pixel positioned on the other side of the sub-pixel corresponding to the second shadow pixel in the first pixel structure.

Claim 17. (original) The pixel array of claim 16, wherein the second shadow pixel is fabricated using a material capable of producing electromagnetic radiation in the invisible part of the spectrum.

Claim 18. (currently amended) A non-touch panel input device, comprising:
a display panel, comprising a plurality of pixel structures, at least some of the pixel structures each having at least two shadow ~~pixel~~ pixels that are perpendicularly configured one to another, wherein the shadow pixels are capable of emitting signals of electromagnetic radiation in the invisible part of the spectrum containing location information; and

a sensor suspended over the display panel, wherein the sensor is capable of receiving the ~~invisible~~ signals of electromagnetic radiation in the invisible part of the spectrum from the shadow pixel to find the location information by which the location of the sensor relative to the display can be obtained.

Claim 19. (currently amended) A non-touch panel input device, comprising:
a display panel having a pixel array, wherein the pixel array at least comprises a

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plurality of first pixel structures with each pixel structure at least comprising:

a sub-pixel, adapted for displaying a color in the visible light spectrum; [[and]]

a first strip-shaped shadow pixel, longitudinally positioned on and extending along a first side of the sub-pixel, wherein the first strip-shaped shadow pixel emits electromagnetic radiation in the invisible part of the spectrum either in a first electromagnetic radiation state or in a second electromagnetic radiation state; [[and]]

a second strip-shaped shadow pixel, ~~longitudinally~~ latitudinally positioned on and extending along ~~another~~ a second side of the sub-pixel, wherein the second strip-shaped shadow pixel emits electromagnetic radiation in the invisible part of the spectrum either in a third electromagnetic radiation state or in a fourth electromagnetic radiation state such that the third and the fourth electromagnetic radiation state are different from each other[[,]]; and

a sensor suspended over the display panel, wherein the sensor is adapted for remotely obtaining a location of the sensor relative to the display by detecting the first electromagnetic radiation state or the second electromagnetic radiation state of the electromagnetic radiation in the invisible part of the spectrum emitted from the first strip-shaped shadow pixel and the third electromagnetic radiation state or the fourth electromagnetic radiation state of the electromagnetic radiation in the invisible part of the spectrum emitted from the second strip-shaped shadow pixel.